Claims

1. A portable device for oral administration of a fluid source to an animal, said device comprising

i) a hollow, axially-elongated member comprising
   a) a distal end comprising a first opening, preferably in the form of a nozzle portion, and
   b) a proximal end comprising a second opening connected to

ii) a handle comprising
   a) a distal portion connecting the handle to said axially-elongated member, and
   b) a proximal portion connecting the handle to

iii) a flexible tube comprising
   c) a distal end comprising a first opening connected to the handle, and
   d) a proximal end comprising a second opening connected to

iv) a hollow adaptor capable of attaching the flexible tube to a fluid source container, said adaptor comprising
   a) a distal end comprising a first opening, said distal end capable of securing attachment of said adaptor to the tubing, and
   b) a proximal end comprising a second opening, said proximal end capable of bringing the adaptor in contact with the fluid source stored in

v) a container insert, preferably in the form of a disposable, flexible polymer bag, said container insert being arranged in

vi) a fluid source container fitted to holding said container insert, said fluid source container comprising

a) at least one attachment site capable of securing the attachment of the container to the adaptor, and

b) means for transporting the device by the operator,

vii) said device further comprising a switch mechanism for regulating the flow of liquid through the axially-elongated member.

2. The device according to claim 1, wherein the fluid source comprises or consists of a liquid source.

3. The device according to claim 2, wherein the liquid source is selected from the group consisting of colostrum, electrolytes, milk, artificial milk, and substitutes.

4. The device according to claim 3, wherein the liquid source is colostrum.

5. The device according to claim 4, wherein the colostrum is obtained from a domestic animal, including a bovine species.

6. The device according to claim 5, wherein said animal is a domestic animal.

7. The device according to claim 6, wherein the domestic animal is a ruminant.

8. The device according to claim 7, wherein the ruminant is a bovine species.

9. The device according to claim 8, wherein the bovine species is selected from the group consisting of Holstein and Jersey.

10. The device according to any of claims 8 or 9, wherein the bovine species is a newly born bovine species less than twenty days old.

11. The device according to any of claims 8 or 9, wherein the bovine species is a newly born bovine species less than fifteen days old.

12. The device according to any of claims 8 or 9, wherein the bovine species is a newly born bovine species less than ten days old.

13. The device according to any of claims 8 or 9, wherein the bovine species is a newborn bovine species less than five days old.

14. The device according to claim 1, wherein the axially-elongated member comprising the nozzle portion is capable of being inserted into the esophagus of a domestic animal.

15. The device according to claim 14, wherein the nozzle is rounded in shape and has an outer diameter larger than the outer diameter of the rest of the axially-elongated member.

16. The device according to any of claims 14 and 15, wherein the nozzle portion is of a shape and size which preferably inhibits the axially-elongated member from being inserted into the trachea of the domestic animal.

17. The device according to any of claims 14 to 16, wherein said axially-elongated member and said nozzle portion is manufactured as integrated into one piece of material.

18. The device according to any of claims 1 to 17, wherein the axially-elongated member has retained at least some degree of flexibility.

19. The device according to any of claims 1 to 17, wherein the axially-elongated member is essentially inflexible.

20. The device according to any of claims 1 to 19, wherein the axially-elongated member comprises or consists of a polymer.

21. The device according to any of claim 20, wherein the polymer is a thermoplastic polymer.

22. The device according to claim 21, wherein the polymer is polypropylene or polyethylene.

23. The device according to any of claims 1 to 22, wherein the length of the axially-elongated member from the tip of the nozzle portion to the distal portion of the handle is from 30 cm to 34 cm, such as about 32 cm.

24. The device according to any of claims 1 to 23, wherein the inner diameter of the axially-elongated member excluding the nozzle portion is from 0.5 cm to 2 cm, such as about 0.8 cm, for example about 1.0 cm, such as about 1.2 cm, for example 1.5 cm.

25. The device according to claim 24, wherein the outer diameter of the axially-elongated member excluding the nozzle portion is from 0.2 cm to about 1 cm larger than the inner diameter of the rest of the axially-elongated member.

26. The device according to any of claims 1 to 25, wherein the switch mechanism for regulating the flow of fluid source through the axially-elongated member is comprised in the handle.

27. The device according to claim 26, wherein the switch mechanism is manually operated.

28. The device according to any of claims 26 and 27, wherein the switch mechanism comprises a valve.

29. The device according to claim 28, wherein the switch mechanism comprises a sliding valve.

30. The device according to any of claims 1 to 29, wherein the shape and size of the handle prevents it from being inserted into the mouth of the animal thereby preventing the axially-elongated member from reaching beyond a predetermined region of the esophagus.

31. The device according to any of claims 1 to 30, wherein the handle is hollow.

32. The device according to any of claims 1 to 31, wherein the handle is detachably connected to the axially-elongated member.

33. The device according to any of claims 1 to 32, wherein the handle consists of at least two detachable parts.

34. The device according to any of claims 1 to 33, wherein the adaptor comprises a tapering end.

35. The device according to claim 34, wherein the tapering end is capable of penetrating said container insert.

36. The device according to claim 35, wherein said adaptor further comprises a shoulder distal to said tapering end for providing a tight connection between the adaptor and said container insert.

37. The device according to any of claims 34 to 36, wherein said adaptor further comprises a plurality of locking pins for securing the attachment of the adaptor to said fluid source container.

38. The device according to any of claims 34 to 37, wherein said adaptor further comprises two oppositely located planar flanges for rotating the adaptor into locking position once it has made contact with the fluid source container.

39. The device according to any of claims 34 to 38, wherein said adaptor further comprises a portion for detachably connecting the adaptor to a cleaning device.

40. The device according to claim 39, wherein said cleaning device is a water tap optionally fitted with a hosepipe adaptor capable of detachably connecting the water tap to the adaptor of the device.

41. The device according to any of claims 1 to 40, wherein said container comprises at least one attachment site for the adaptor of the device.

42. The device according to claim 41, wherein said container further comprises means for engagement of said adaptor on the inside of said at least one attachment site.

43. The device according to any of claims 1 to 42, wherein said container further comprises one or more means for transporting the device by the operator.

44. The device according to claim 43, wherein said means for transporting enable the operator to carry the container on his back.

45. The device according to any of claims 1 to 44, wherein said container comprises a single polymer sheet capable of folding into a container, said polymer sheet comprising

a first wall portion, a second wall portion, and a base portion

wherein the first wall portion is permanently fixed to said second wall portion along a single first axis,

wherein said first wall portion is permanently fixed to a base portion along a single second axis,

wherein said second wall portion is detachably fixed to said first wall portion along a single third axis,

and wherein said second axis connects said first and third axes.

46. The device according to any of claims 1 to 45, wherein said container is capable of being unfolded into an essentially planar sheet when not in use.

47. The device according to any of claims 1 to 46, wherein said container insert is disposable.

48. A container said container comprising a single, flexible polymer sheet, said polymer sheet comprising a first wall portion, a second wall portion, and a base portion,

wherein the first wall portion is permanently fixed to said second wall portion along a single first axis,

wherein said first wall portion is permanently fixed to a base portion along a single second axis,

wherein said second wall portion is detachably fixed to said first wall portion along a single third axis, and

wherein said second axis connects said first and third axes.

49. The container according to claim 48, wherein said container is portable.

50. The container according to any of claims 48 and 49, wherein said container comprises at least one attachment site capable of securing the attachment of an adaptor to the container.

51. The container according to any of claims 48 to 50, wherein said container is capable of being unfolded into an essentially planar sheet when not in use.

52. The container according to any of claims 48 to 51, wherein the container further comprises means for transporting the device by the operator.

53. The container according to claim 52, wherein said means for transporting the device enable the operator to carry the container on his back.

54. The container according to any of claims 48 to 53, wherein the container further comprises a container insert, preferably in the form of a flexible polymer bag.

55. The container according to any of claim 48 to 54, wherein the container insert is disposable.

56. A device for oral administration of a fluid source to an animal, said device comprising

i) a hollow, axially-elongated member comprising
   a) a distal end comprising a first opening, preferably in the form of a nozzle portion, and
   b) a proximal end comprising a second opening connected to

ii) a handle comprising
   a) a distal portion connecting the handle to said axially-elongated member, and
   b) a proximal portion connecting the handle to

iii) a flexible tube comprising
   a) a distal end comprising a first opening connected to the handle, and
   b) a proximal end comprising a second opening connected to

iv) a hollow adaptor capable of attaching the flexible tube to a fluid source container, said adaptor comprising
   a) a distal end comprising a first opening, said distal end capable of securing attachment of said adaptor to the tubing, and
   b) a proximal end comprising a second opening, said proximal end capable of bringing the adaptor in contact with the fluid source stored in

v) said device further comprising a switch mechanism for regulating the flow of liquid through the axially-elongated member.

57. The device according to claim 56, wherein the axially-elongated member comprising the nozzle portion is capable of being inserted into the esophagus of a domestic animal.

58. The device according to claim 57, wherein the nozzle is rounded in shape and has an outer diameter larger than the outer diameter of the rest of the axially-elongated member.

59. The device according to any of claims 57 and 58, wherein the nozzle portion is of a shape and size which preferably inhibits the axially-elongated member from being inserted into the trachea of the domestic animal.

60. The device according to any of claims 57 to 59, wherein said axially-elongated member and said nozzle portion is manufactured as integrated into one piece of material.

61. The device according to any of claims 56 to 60, wherein the axially-elongated member has retained at least some degree of flexibility.

62. The device according to any of claims 56 to 60, wherein the axially-elongated member is essentially inflexible.

63. The device according to any of claims 56 to 62, wherein the axially-elongated member comprises or consists of a polymer.

64. The device according to claim 63, wherein the polymer is a thermoplastic polymer.

65. The device according to claim 64, wherein the polymer is polypropylene or polyethylene.

66. The device according to any of claims 56 to 65, wherein the length of the axially-elongated member from the tip of the nozzle portion to the distal portion of the handle is from 30 cm to 34 cm, such as about 32 cm.

67. The device according to any of claims 56 to 66, wherein the inner diameter of the axially-elongated member excluding the nozzle portion is from 0.5 cm to 2 cm, such as about 0.8 cm, for example about 1.0 cm, such as about 1.2 cm, for example 1.5 cm.

68. The device according to claim 56, wherein the switch mechanism for regulating the flow of fluid source through the axially-elongated member is comprised in the handle.

69. The device according to claim 68, wherein the switch mechanism is manually operated.

70. The device according to any of claims 68 and 69, wherein the switch mechanism comprises a valve.

71. The device according to claim 70, wherein the switch mechanism comprises a sliding valve.

72. The device according to any of claims 56 to 71, wherein the shape and size of the handle prevents it from being inserted into the mouth of the animal thereby preventing the axially-elongated member from reaching beyond a predetermined region of the esophagus.

73. The device according to any of claims 56 to 72, wherein the handle is hollow.

74. The device according to any of claims 56 to 73, wherein the handle is detachably connected to the axially-elongated member.

75. The device according to any of claims 56 to 74, wherein the handle consists of at least two detachable parts.

76. The device according to any of claims 56 to 75, wherein the adaptor comprises a tapering end.

77. The device according to claim 76, wherein the tapering end is capable of penetrating said container insert.

78. The device according to claim 77, wherein said adaptor further comprises a shoulder distal to said tapering end for providing a tight connection between the adaptor and said container insert.

79. The device according to any of claims 76 to 78, wherein said adaptor further comprises a plurality of locking pins for securing the attachment of the adaptor to said fluid source container.

80. The device according to any of claims 76 to 79, wherein said adaptor further comprises two oppositely located planar flanges for rotating the adaptor into locking position once it has made contact with the fluid source container.

81. The device according to any of claims 76 to 80, wherein said adaptor further comprises a portion for detachably connecting the adaptor to a cleaning device.

82. The device according to claim 81, wherein said cleaning device is a water tap optionally fitted with a hosepipe adaptor capable of detachably connecting the water tap to the adaptor of the device.

83. A method for oral administration of a fluid or liquid source to an animal, said method comprising the steps of

i) providing a fluid or liquid source,

ii) providing a device according to any of claims 1 to 47,

iii) filling said container insert of the device with said fluid or liquid source, and

iv) administering said fluid or liquid source to said animal, optionally by operating said switch mechanism.

84. The method of claim 83, wherein said liquid source is selected from colostrum, aqueous solutions of nutrients or electrolytes, aqueous solutions of medicaments, and the like.

85. A method for oral administration of colostrum to a bovine species, said method comprising the steps of

i) providing a colostrum in liquid form,

ii) providing a device according to any of claims 1 to 47,

iii) filling said container insert of the device with said colostrum, and

iv) administering said colostrum to said bovine species, optionally by operating said switch mechanism.

86. A method for conferring passive immunity to a newly born domestic animal, said method comprising the steps of

i) providing a passive immunity source, such as immunoglobulins,

ii) providing a device according to any of claims 1 to 47,

iii) filling said container insert of the device with said passive immunity source, and

iv) administering said passive immunity source to said bovine species, optionally by operating said switch mechanism.

87. The method of any of claims 83 to 86, wherein the size of the nozzle allows the operator of the device to determine the present position of the nozzle in the esophagus from the outside of the animal by pressing said nozzle portion against the inside wall of the esophagus.